

Calculation of Screening Levels for Migration of Contaminants in Soil to Ground Water Based Upon IDEM Ground Water to Indoor Air Screening Level:

Chemical of Concern	RCG MTGWSL (mg/kg)	SL _{POTABLE} (ug/L)	Ground Water to Indoor Air Screening Level (ug/L)	DAF	Koc (L/kg)	Foc (g/g)	Porosity _{water}	Porosity _{air}	Henry's Law Constant (unitless)	Dry Soil Bulk Density (kg/L)	SL _{MTG} ⁴ (mg/kg)
1,1-Dichloroethane	0.16	28	130	20	31.8	0.002	0.3	0.13	0.2298	1.5	0.737
1,2-Dichloroethane	0.028	5	50	20	39.6	0.002	0.3	0.13	0.0482	1.5	0.283
cis-1,2-Dichloroethene ¹	0.41	70	-	20	39.6	0.002	0.3	0.13	0.1668	1.5	0.411
trans-1,2-Dichloroethene ²	0.62	100	-	20	39.6	0.002	0.3	0.13	0.3835	1.5	0.625
Methylene Chloride ³	0.025	5	7,580	20	21.7	0.002	0.3	0.13	0.1329	1.5	38.654
Tetrachloroethylene (PCE)	0.045	5	110	20	94.9	0.002	0.3	0.13	0.7236	1.5	0.996
1,1,1-Trichloroethane	1.4	200	13,000	20	43.9	0.002	0.3	0.13	0.7032	1.5	90.668
Trichloroethylene (TCE)	0.036	5	9.1	20	60.7	0.002	0.3	0.13	0.4027	1.5	0.065
Vinyl Chloride	0.014	2	2.1	20	21.7	0.002	0.3	0.13	1.1365	1.5	0.014

¹ Because a groundwater to indoor air screening level is not available for cis-1,2-Dichloroethene, the groundwater potable use screening level was used for calculations.² Because a groundwater to indoor air screening level is not available for trans-1,2-Dichloroethene, the groundwater potable use screening level was used for calculations.³ Because IDEM does not have groundwater to indoor air screening level for methylene chloride, the value in table is based on US EPA's VISL calculator at 12.5°C.⁴ The calculated screening level for migration to ground water is based on Equation A-9 of IDEM's Appendix A: Screening Levels